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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
087479,999	06/28/94	BRAKEL	ENZ-47(C)

HM31/0104

ENZO THERAPEUTICS INC
ENZO BIOCHEM INC
527 MADISON AVENUE 9TH FLOOR
NEW YORK NY 10022

EXAMINER
MARSCHIEL, A

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 01/04/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/479,999

Applicant(s)
Brakel et al.

Examiner
Ardin Marschel

Group Art Unit
1634



☒ Responsive to communication(s) filed on Sep 30, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-51 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-51 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Since this application is eligible for the transitional procedure of 37 CFR 1.129(a), and the fee set forth in 37 CFR 1.17(r) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.129(a).

Applicants' arguments, filed 9/30/98, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections are reiterated from that office action. They constitute the complete set presently being applied to the instant application.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, 12-14, 19, and 42-50 are rejected under 35 U.S.C. § 102(b) as being anticipated by Miller et al. (1985).

This rejection is reiterated and maintained from the previous office action, mailed 3/31/98. Applicants argue that Miller et al. discloses oligodeoxyribonucleotides which are ALL modified with methylphosphonates. In response, Miller et al. on page 772, Figure 3, discloses the oligomer given as:

³²pTpGpCpApCpCpApT. The notation "p" denotes a normal

phosphodiester-linkage. Thus, at least one such linkage is present in this oligomer as required in the newly submitted limitation of instant claim 1, for example, contrary to the allegation of applicants. Applicants' argument is therefore non-persuasive in overcoming the rejection.

Claims 1-4, 12-14, and 42-50 are rejected under 35 U.S.C. § 102(b) as being anticipated by Stein et al. (1988).

This rejection is reiterated and maintained from the previous office action, mailed 3/31/98. Applicants argue that Stein et al. motivates and suggests that ALL PS oligomers are the most desirable for increased RNase-H activity is desired and not to use S-capped oligomers or other non-fully modified oligomers. These arguments are non-persuasive in overcoming the rejection because the reference does disclose S-capped oligomers as well as non-fully modified oligomers and therefore reads on the instant claims, even if the reference also motivates and suggests certain preferred oligomer types.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-51 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Walder et al.(1988) in view of Miller et al.(4,469,863) and Inoue et al.(1988).

This rejection is maintained and reiterated as given in the office action, mailed 3/31/98. Applicants argue that Walder et al. states that antisense oligomers should be recognized and cleaved by Rnase-H. This characterization is incorrect in that mRNA is cleaved by Rnase-H after hybridization with the antisense oligomer. The antisense oligomer is not cleaved by Rnase-H. Applicants then argue that Miller et al. is directed to only fully modified oligomers. This has been noted above as incorrect also because Miller et al. in Figure 3 therein discloses a partially modified oligomer and is not limited to fully linkage modified oligomers. Applicants then argue that Inoue et al. is directed to Rnase-H resistance and not recognition by Rnase-H.

Consideration of Inoue et al. reveals that it is directed to the practice of antisense oligomers that mediate RNase-H cleavage of mRNA via modified portions, not necessarily all linkages therein, that are stable during antisense usage and still hybridize to mRNA. This reference was utilized in the rejection to support oligomer embodiments with modifications at the 2'-deoxyribose site and not regarding RNase-H resistance or sensitivity per se.

No claim is allowed.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The CM1 Fax Center number is (703) 308-4242.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703) 308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152.

Any inquiry of a general nature or relating to the status of this application should be directed to the Chemical Matrix receptionist whose telephone number is (703) 308-0196.

January 4, 1999



ARDIN H. MARSCHEL
PRIMARY EXAMINER